

ID	Task Name	Duration	Start	Finish	Predecessors	Constraint	WBS	Resource Names
432	<b>VLPC CASSETTE MANUFACTURE</b>	256.6 w	9/15/95	11/13/00		As Soon As		
433	<b>VLPC DEVELOPMENT</b>	48.4 w	5/13/96	5/2/97		As Soon As		
434	HISTE V Characterization	12 w	5/13/96	8/6/96		Finish No Ea		PhysU112[2],PhysF112[0.25]
435	HISTE V 128 Ch Cassette Production	8 w	8/29/96	10/24/96	434SS+2 w	Start No Earl		MTF112[2],PhysF112[0.25]
436	<b>HISTE V Characterization complete</b>	0 w	10/24/96	10/24/96	435	As Soon As		
437	<b>Histe VI benchmark tests</b>	42 w	6/27/96	5/2/97		As Soon As		
438	Fabrication of HISTE VI Test Cassettes	6 w	6/27/96	8/8/96		Start No Earl		DesF112,MTF112,PhysF112[0.25]
439	HISTE VI Test	12 w	12/4/96	3/7/97	438	Finish No Ea		PhysU112[2],MTF112[0.25]
440	<b>Notice to proceed for full HISTE VI production</b>	0 w	3/7/97	3/7/97	439	As Soon As		
441	Full Analysis of HISTE VI Data	8 w	3/10/97	5/2/97	440	As Soon As f		PhysU112,PhysF112
442	<b>CASSETTE MANUFACTURE</b>	254.4 w	9/15/95	10/27/00		As Soon As		
443	<b>Task II</b>	141.4 w	11/1/95	9/1/98		As Soon As		
444	System Engineering	12 w	11/1/95	1/29/96		Start No Earl		MEF112,DesF112[2],PhysF112[0.5]
445	VLPC Module Design	8 w	1/24/96	3/19/96	444	As Soon As f		DesF112[1.5]
446	Hybrid Fabrication and Assembly	16 w	12/1/95	3/25/96		Start No Earl		
447	Hybrid Test/Characterization	16 w	12/22/95	4/15/96	446SS+3 w	As Soon As f		
448	Parts Procurement	36 w	6/26/96	3/20/97		Start No Earl		
449	<b>Ready for 1st article assembly</b>	0 w	3/20/97	3/20/97	448	As Soon As		
450	<b>Fiber Module Assembly</b>	84.4 w	6/26/96	3/13/98		As Soon As		
451	Factory Setup	6 w	6/26/96	8/7/96		Start No Earl		MTF112,DesF112[0.25],ETF112
452	Module assembly procedure debug	68 w	10/8/96	2/27/98	451	Start No Earl		DesF112[0.1],MTF112
453	<b>Procedures Finalized</b>	0 w	3/1/98	3/1/98	452	As Soon As		
454	Module Assembly	2 w	3/2/98	3/13/98	452	As Soon As f		MTF112[2],MEF112[0.1],PhysF112[0.25]
455	1st Article Cassette Assembly	4 w	3/16/98	4/10/98	449,450	As Soon As f		MEF112,MTF112,PhysF112[0.25]
456	<b>1024 Channel cassette test stand</b>	30 w	11/1/95	6/4/96		As Soon As		
457	DAQ/Software design/debug	30 w	11/1/95	6/4/96		Start No Earl		PhysU112,ETU112
458	<b>M3-Ready for 1st VLPC Cassette Test</b>	0 w	4/10/98	4/10/98	455,457,509	As Soon As		
459	1st Article Test	20 w	4/13/98	9/1/98	458	As Soon As f		MTF112,ETF112[0.5],PhysU112[2],PhysF112
460	<b>HISTE VI Cassette Procurement</b>	254.4 w	9/15/95	10/27/00		As Soon As		
461	Design Finalization	6 w	9/2/98	10/14/98		As Soon As f		
462	<b>Cassette Parts Procurement</b>	148 w	9/2/97	8/31/00		As Soon As		
463	Finalize Engineering Drawings	4 w	9/2/98	9/30/98	459	As Soon As f		MEF112,DesF112
464	Submit Parts for Bids	3.2 w	9/2/97	9/23/97		As Soon As f		
465	Award Contracts-FY97	0.2 w	9/24/97	9/24/97		As Soon As f	1.1.2.4.1.2,1.1.2.4.1.3,1.1.2.4.1.4	k\$[7.27],k\$c[1.6]
466	Qualify Flex Circuit Vendor	95 w	9/25/97	8/30/99	465	As Soon As f		
467	Award Contracts-FY99	0.2 w	8/31/99	8/31/99	466	As Soon As f	1.1.2.4.1.4(.87),1.1.2.4.1.5(.32)	k\$[2.07],k\$c[0.62]
468	Flex Circuit Delivery	32 w	1/19/00	8/31/00	467	Start No Earl		
469	<b>Assembly Tooling</b>	4 w	3/16/98	4/10/98		As Soon As		
470	Tooling Design	2 w	3/16/98	3/27/98	455SS	As Soon As f		MTF112
471	Procure tooling	2 w	3/30/98	4/10/98	470	As Soon As f		
472	<b>Special Test Equipment</b>	111.4 w	4/1/96	6/26/98		As Soon As		
473	<b>Optical bundle test stand</b>	19.8 w	2/9/98	6/26/98		As Soon As		
474	Design	6 w	2/9/98	3/20/98	452FS-3 w	As Soon As f		DesF112[0.25],PhysF112[0.5]
475	Parts fabrication and procurement	9.8 w	3/23/98	5/29/98	474	As Soon As f		MTF112[0.25],PhysF112[0.1]
476	Assembly and debug	4 w	6/1/98	6/26/98	475	As Soon As f		MTF112[0.5],ETF112[0.5],PhysF112
477	<b>Flex circuit test stand</b>	21.2 w	4/1/96	8/28/96		As Soon As		
478	Procure commercial cable tester	4 w	4/1/96	4/26/96		Start No Earl	1.1.2.4.1.4(.02)	k\$[0.04],k\$c[0.01]
479	Design/layout/procure pc interface boards	3 w	8/1/96	8/21/96		Start No Earl		ETF112
480	Assemble and debug test fixture	1 w	8/22/96	8/28/96	478,479	As Soon As f		ETF112
481	<b>HISTE VI Hybrid Production</b>	229.2 w	9/15/95	5/1/00		As Soon As		
482	Procure VLPCs	10 w	9/15/95	11/27/95		Start No Earl	1.1.2.4.1.1(.89)	k\$[28.11]
483	Detector Fab Production	88 w	9/16/96	6/26/98		Start No Earl		
484	<b>M2-VLPC Production 50% Complete</b>	0 w	8/31/97	8/31/97	483SS+50 %	As Soon As		
485	<b>M3-VLPC Production Complete</b>	0 w	6/26/98	6/26/98	483	As Soon As		
486	Hybrid Assembly and Test	58 w	5/1/98	7/2/99	483FS-8 w	As Soon As f		
487	Fermilab Hybrid test	40.4 w	7/6/99	5/1/00	486	As Soon As f		MTF112[0.1],PhysU112[0.25]
488	VLPC Contract Adjustment	0.2 w	11/30/98	11/30/98		Start No Earl	1.1.2.4.1.1(.11)	k\$[3.47]
489	<b>Cassette factory setup</b>	63 w	4/13/98	7/20/99		As Soon As		
490	Factory layout design	5 w	4/13/98	5/15/98	469	Start No Earl	1.1.2.4.2	MEF112,PhysF112[0.25],k\$[0.98],k\$c[0.07]
491	Full tooling checkout	4 w	5/18/98	6/15/98	490	As Soon As f		MEF112,MTF112
492	Factory setup and debug	50 w	7/15/98	7/20/99	491FS+4 w	As Soon As f		MTF112,MEF112,PhysU112
493	<b>Factory Ready</b>	0 w	7/20/99	7/20/99	492	As Soon As		
494	<b>Module Assembly and Test</b>	49 w	7/21/99	7/18/00		As Soon As		
495	PreProduction checkout	9 w	7/21/99	9/22/99	493	As Soon As f		MEF112[0.5],MTF112[2],PhysU112[0.25]
496	<b>Cassette Production Readiness Review</b>	0 w	10/4/99	10/4/99	466,495	Start No Ear		
497	Production	40 w	9/23/99	7/18/00	495	As Soon As f		MTF112[3],MEF112[0.5],PhysU112[0.5]
498	<b>Module Production Begun</b>	0 w	9/23/99	9/23/99	497SS	As Soon As		
499	<b>Cassette Assembly and Test</b>	40 w	1/19/00	10/27/00		As Soon As		
500	Module/Hybrid integration	37 w	1/19/00	10/6/00	486SS+8 w,497SS+9 w,468SS	As Soon As f		MTF112[0.5],ETF112[0.25],PhysU112[0.25]
501	Cassette assembly	37 w	1/26/00	10/13/00	500SS+1 w	As Soon As f		MTF112[0.5],MEF112[0.25],PhysU112[0.2],DesF112[0.1]
502	<b>M3-VLPC Cassette Assembly Begun</b>	0 w	1/26/00	1/26/00	501SS	As Soon As		
503	<b>M3-VLPC Cassette Assembly 50% Complete</b>	0 w	6/5/00	6/5/00	501SS+50 %	As Soon As		

ID	Task Name	Duration	Start	Finish	Predecessors	Constraint	WB\$	Resource Names
504	<b>M3-VLPC Cassette Assembly Complete</b>	0 w	10/13/00	10/13/00	501	As Soon As		
505	Cassette Test	37 w	2/9/00	10/27/00	501SS+2 w	As Soon As f		PhysU112[0.5],MTF112[0.1]
506	<b>CRYOGENIC SYSTEM</b>	201.6 w	5/28/96	6/26/00		As Soon As		
507	Test Cryostat Design	20 w	5/28/96	10/16/96		Start No Earl		MEF112,DesF112
508	Test Cryostat Fabrication	25 w	10/17/96	4/23/97		As Soon As f	1.1.2.5.1	MTF112,DesF112,MEF112[0.5],k\$[0.18]
509	Test Cryostat Commissioning	2 w	7/1/97	7/15/97	508	As Soon As f		MEF112[0.5],MTF112,PhysF112[0.5]
510	Cassette Thermal Test	29.4 w	10/22/97	6/1/98		Start No Earl		MEF112[0.3],MTF112[0.3]
511	<b>M3-Test VLPC Cryostat Ready</b>	0 w	7/15/97	7/15/97	509	As Soon As		
512	Procure raw materials for line and boxes fabrication	1 w	9/2/97	9/8/97		Start No Earl	1.1.2.5.3(0.9)	MEF112,k\$[0.47]
513	LN2/Lhe Transfer Line/Boxes Design	19.2 w	11/3/97	3/31/98		Start No Earl		MEF112[0.5],DesF112[0.5]
514	LN2/Lhe Transfer Line/Boxes Fabrication	42 w	11/17/97	9/24/98	512,513SS+2 w	As Soon As f	1.1.2.5.3(0.1)	MEF112[0.1],MTF112[0.5],k\$[0.05]
515	LN2/Lhe Transfer Line/Boxes Installation	8 w	9/25/98	11/19/98	514	As Soon As f		MEF112[0.2],MTF112[2]
516	Final Cryostat Design	10 w	8/25/99	11/3/99	497SS-4 w,510	Start No Earl		MEF112,DesF112
517	Procure stock for cryostats	1 w	9/2/97	9/8/97		Start No Earl	1.1.2.5.2(0.12)	MEF112,k\$[0.26],k\$[0.03]
518	Fabricate east cryostat	28 w	11/4/99	6/5/00	516,517	As Soon As f	1.1.2.5.2(.44)	MTF112[2],MEF112[0.2],k\$[0.96],k\$[0.1]
519	<b>Begin East Cryostat Fabrication</b>	0 w	11/4/99	11/4/99	518SS	As Soon As		
520	Installation Equipment Design	2 w	3/27/00	4/7/00	518FS-10 w	Start No Earl		MEF112[0.5],DesF112[0.75]
521	Fab Installation Equipment	4 w	4/10/00	5/5/00	520	As Soon As f		MEF112[0.3],MTF112
522	Procure temperature sensors	1 w	6/2/97	6/6/97		Start No Earl	1.1.2.5.5(0.35)	MTF112,k\$[0.19],k\$[0.01]
523	Fabricate west cryostat	29 w	11/4/99	6/12/00	518SS	As Soon As f	1.1.2.5.2(.44)	MTF112[2],MEF112[0.1],k\$[0.96],k\$[0.1]
524	Cryostat Installation/Hookup	3 w	6/6/00	6/26/00	518,521,523FF+1.6 w	As Soon As f	1.1.2.5.4	MTF112[2],MEF112[0.1],k\$[0.1],k\$[0.01],Platform[0.25]
525	<b>M3-East VLPC Cryostat Installed</b>	0 w	6/12/00	6/12/00	524SS+1 w	As Soon As		
526	System Installation/Test	2 w	6/13/00	6/26/00	515,524SS+1 w	As Soon As f		MEF112[1.5],MTF112[2]
527	<b>M3-VLPC Cryo System Operational</b>	0 w	6/26/00	6/26/00	526	As Soon As		
528	Install VLPC cassettes in cryostats	14 w	8/7/00	11/13/00	505SS+30 %,526FS+1 w,2139F	As Soon As f		PhysU112[0.2],MTF112[0.2],ETF112[0.5],PhysF112[0.2],Platform